

# PATENT COOPERATION TREATY

Translation

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See Form PCT/ISA/210 (sheet 2)**

Applicant's or agent's file reference

**P 03 037 PCT Be-ah**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/EP2004/012310**

International filing date (day/month/year)

**29.10.2004**

Priority date (day/month/year)

**30.10.2003**

International Patent Classification (IPC) or both national classification and IPC

**G01M5/00, G01L1/22**

Applicant

**HOTTINGER BALDWIN MESSTECHNIK GMBH**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
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PCT/EP2004/012310

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
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PCT/EP2004/012310

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	4-6, 11-20	YES
	Claims	1-3, 7-10	NO
Inventive step (IS)	Claims	5, 6, 11-17	YES
	Claims	1-4, 7-10, 18-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations:

1 Reference is made to the following documents:

D1: WO 03/039894 A (ZF LEMFOERDER METALLWAREN AG; GRAEBER, JUERGEN; KRUSE, JOCHEN; SPRATTE) 15 May 2003 (2003-05-15)

D2: US 4 849 668 A (CRAWLEY ET AL) 18 July 1989 (1989-07-18)

D3: WO 01/39253 A (THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY) 31 May 2001 (2001-05-31)

D4: US 2002/021058 A1 (DUERR JOHANNES K) 21 February 2002 (2002-02-21)

2 INDEPENDENT CLAIM 1

The present application does not meet the requirements of PCT Article 33(1), because the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2). Document D1 discloses (the references between parentheses relate to said document):

a device in a chassis part for determining strains on fibre composite components, with at least one strain gauge, which is integrated in the fibre composite component (claims 1 and 2).

WRITTEN OPINION OF THE  
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PCT/EP2004/012310

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3 DEPENDENT CLAIMS 2-4, 7-10, 18-19

Claims 2-4, 7-10, 18-19 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty and inventive step.

4 DEPENDENT CLAIMS 5, 6, 11, 12, 20

The combination of features contained in the dependent claims is neither known from the available prior art nor suggested by it. The reasons are as follows:

Integrated strain gauges are known per se (D1), but in the conventional solutions the connection leads are placed in a plane with the measuring foil (D2, D4). Perpendicularly configured connecting pins which protrude from the fibre covering layers in an electrically insulated manner are not known and cannot be derived directly from the prior art.

Dependent claims 5, 6 and 20, and the method for producing such a measuring arrangement, claims 11 and 12, are therefore novel and inventive.

5 INDEPENDENT CLAIM 13

5.1

Document D1 is considered to be the closest prior art. It discloses (the references between parentheses relate to said document):

a device in a chassis part for determining strains on fibre composite components, with at least one strain gauge, which is integrated in the fibre composite component (claims 1 and 2),

from which the subject matter of the independent claim 13 differs in that connecting pins arranged perpendicularly

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in relation to the measuring grid of the strain gauge are provided as electrical connecting points.

5.1.1

The subject matter of claim 13 is therefore novel (PCT Article 33(2)). The problem addressed by the present invention can therefore be considered that of not reducing the stability of the material when foil measuring grids are installed and that of facilitating automation of the production process by carrying out wiring after the production of the composite material .

5.1.2

The solution to this problem that is proposed in claim 13 of the present application involves an inventive step (PCT Article 33(3) for the following reasons:

The solution to this problem disclosed by the application in claim 13 is not suggested in any of the documents or other prior art disclosures.

6. DEPENDENT CLAIMS 14-17

The claims that are dependent on claim 13, claims 14-17, are therefore likewise novel and inventive.